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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,529	11/28/2003	An-Ming Wu	33677.5	7601

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EXAMINER

FIGUEROA, JOHN J

ART UNIT PAPER NUMBER

1712

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

✓

<b>Office Action Summary</b>	<b>Application No.</b> 10/722,529	<b>Applicant(s)</b> WU ET AL.	
	<b>Examiner</b> John J. Figueroa	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on June 12, 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-40 is/are pending in the application.
- 4a) Of the above claim(s) 1, 3-26 and 34-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1 and 3-40 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/27/04; 4/29/04</u> . | 6) <input type="checkbox"/> Other: _____   |

## DETAILED ACTION

### *Election/Restriction*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 and 3-26, drawn to a drilling fluid comprising, *inter alia*, one or more surfactants having HLB numbers equal to or greater than 7, classified in class 507, subclass 106.
  - II. Claims 27-33, drawn to a process for making an emulsified drilling fluid, classified in class 175, subclass 65
  - III. Claims 34-40, drawn to a drilling fluid containing, *inter alia*, a carrier oil, classified in class 507, subclass 138.

The inventions are distinct, each from the other because:

- a. Inventions I and III are each related to invention II as a product and a process of making thereof. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)).

In the instant case, the claimed drilling fluid (product) recited in each of Groups I and III require *emulsified bituminous material*, whereas the process recited in Group II can be used to make an *emulsified* drilling fluid containing *emulsified oil* from sand cuttings.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

b. Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01).

In the instant case the claimed product recited in Group I is drawn to a drilling fluid comprising, *inter alia*, one or more surfactants having HLB numbers equal to or greater than 7, whereas the claims in Group III are drawn to a drilling fluid comprising, *inter alia*, a carrier oil. Therefore, the claimed drilling fluids in Groups I and III are distinct in that they require distinct components and thus require a different search. Because inventions I and III are distinct for the reasons given above and the search required for Group I is not required for Groups III, restriction for examination purposes as indicated is proper.

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

3. During a telephone conversation with Mr. Donald V. Tomkins on December 21, 2005, a provisional election was made of Group II with traverse to prosecute the

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invention of the process for making an emulsified drilling fluid, claims 27-33. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1, 3-26 and 34-40 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

4. The use of the trademarks HME ENERGIZER®, HT-40™, DRILLSO® and SHELLSO® has been noted in this application. (See e.g., pages 6 and 12 of the specification.) It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner that might adversely affect their validity as trademarks.

5. The disclosure is objected to because of the following: there is no generic description of the trademarks HT-40™, DRILLSO® and SHELLSO® (page 12, lines 10-12 of specification).

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 27-33 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 2,288,857 to Subkow (hereinafter 'Subkow') as further evidenced by USPN 3,245,934 to Konrad et al. (hereinafter 'Konrad'), USPN 4,376,700 to Irons (hereinafter 'Irons') or USPN 4,861,612 to Nakano et al. (hereinafter 'Nakano').

Subkow discloses a process for the removal of petroleum (oil), asphalt and "other bitumens" from the mineral matter associated therewith (cuttings) in natural occurring deposits and formations; wherein the bituminous material is emulsified to produce an oil-in-water type emulsion. (Page 1, left col., lines 1-7). The oil and bituminous materials can be found in deposits containing mineral material, such as oil sands, asphalt sands, shale and gravel. (Page 1, left col., lines 8-20). Subkow discloses that the process provides for the emulsification of bitumen in situ whereby the bitumen is stripped from the formation in situ and is recovered as an oil-in-water formation. (Page 1, left col., lines 26-46; page 3, right col., line 73 to page 4, left col., line 9).

Subkow further discloses the solution used for the emulsification to be aqueous and that it can further contain, *inter alia*, solutes that aid in stripping bitumen from the sand, alkali hydroxides (alkaline materials), carbonates (weighting materials), phosphates, silicates, soaps (emulsifying agent), proteins and carbohydrate materials (polymers), sulphonated materials and alkali salts (alkaline materials). (Page 1, left col., line 52 to right col., line 13). The drilling

solution can further contain alcohol to facilitate fractioning (defoaming agent) of the emulsion. (Page 1, right col., lines 42-45; page 3, right col., lines 3-16).

Examples of emulsifying and stabilizing agents disclosed in Subkow are sodium oleate (a common emulsifier), sodium resinate, sodium naphthenate, emulsifying soaps, starch (common viscosity agent), glue, casein and alkali solutions. (Page 1, right col., lines 36-45). It is well known in the art that sodium oleate has a HLB value of approximately 18.0. (See e.g., Konrad, col. 4, line 23; Irons, col. 4, lines 28-30; Nakano, col. 2, lines 34-37 and col. 4, lines 38-40).

Subkow further discloses that the emulsifying agent should be present in sufficient concentration to effect emulsification of the bitumen and to stabilize the emulsion. (Page 2, left col., lines 10-17). The aqueous solution may further contain, emulsified therein, a light hydrocarbon solvent (carrier oil) to facilitate the fluidity of the bitumen. (Page 2, left col., lines 71-74).

The aqueous drilling fluid can be applied directly to an undisturbed formation in situ by providing the aqueous drilling fluid at an elevated temperature through a central well so that as the solution circulates through, e.g., a porous sand, (i.e. the aqueous drilling fluid mixes with the sand cuttings), the bitumen is stripped free from the sand cuttings and is emulsified in the form of small discrete particles surrounded by the aqueous solution (oil-in-water emulsion). The emulsion is stable enough to remain unbroken during its passage through the sands to the well and as it is pumped up to the surface. (Page 2, right col., lines 22-48; page 4, right col., lines 5-17).

In the case of a less porous formation, Subkow discloses that the aqueous drilling fluid can be applied through the well using a surging, or pulsating back and forth motion, of the aqueous solution to effect the emulsification of the bitumen. The emulsion can subsequently be forced into the well and removed to the surface by pumping or gas lift. (Page 3, left col., lines 1-10, 22-37 and 60-62; page 4, left col., lines 10 to right col., line 4).

Thus, claims 27-33 are anticipated by Subkow.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The Examiner can normally be reached on Mon-Thurs & alt. Fri 8:00-5:30pm.

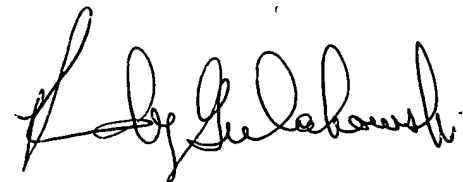
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJF/RG

A handwritten signature in black ink, appearing to read "Randy Gulakowski".

RANDY GULAKOWSKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700